

**PCT**

From the INTERNATIONAL BUREAU

**NOTIFICATION OF THE RECORDING  
OF A CHANGE**

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

ROQUES, Sarah, E.  
J.A. KEMP & Co.  
14 South Square, Gray's Inn  
London WC1R 5LX  
ROYAUME-UNI

Date of mailing (day/month/year)  
28 April 2000 (28.04.00)

Applicant's or agent's file reference  
PP/1021 PCT

**IMPORTANT NOTIFICATION**

International application No.  
PCT/GB99/03738

International filing date (day/month/year)  
10 November 1999 (10.11.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address  
ISIS INNOVATION LIMITED  
2 South Parks Road  
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State of Nationality  
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State of Residence  
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2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address  
ISIS INNOVATION LIMITED  
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Facsimile No.  
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Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☒ the designated Offices concerned  
☐ the International Searching Authority ☐ the elected Offices concerned  
☐ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

I. Britel

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C.20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

23 June 2000 (23.06.00)

International application No.

PCT/GB99/03738

Applicant's or agent's file reference

PP/1021 PCT

international filing date (day/month/year)

10 November 1999 (10.11.99)

Priority date (day/month/year)

10 November 1998 (10.11.98)

Applicant

ERRINGTON, Jeffrey

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

26 May 2000 (26.05.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was



was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Pascal Piriou

Telephone No.: (41-22) 338.83.38

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference N.78803A	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/03738	International filing date (day/month/year) 10/11/1999	Priority date (day/month/year) 10/11/1998
International Patent Classification (IPC) or national classification and IPC C12Q1/18		
Applicant ISIS INNOVATION LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 7 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  26/05/2000	Date of completion of this report  15.12.2000
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Herrero, M  Telephone No. +49 89 2399 8542  

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/03738

## I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

### Description, pages:

1-8 as originally filed

### Claims, No.:

1-19 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/03738

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	1-18
	No:	Claims	19
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-19
Industrial applicability (IA)	Yes:	Claims	1-19
	No:	Claims	

### 2. Citations and explanations see separate sheet

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
see separate sheet

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
see separate sheet

## **SECTION V**

### **2. CITATIONS AND EXPLANATIONS**

2.1 In view of the priority documents pertaining to the present application, the international patent application WO 99/18211 (publication date 15.04.99), cited in the International Search Report under the "P" category, is not to be regarded as state of the art according to Rule 64 (1) PCT as the date of priority of 10.11.98 is hereby validly claimed.

2.2 The following documents have been considered for the purposes of this report:

D1: WO 97/00325 (also cited in the description)

D2: WO 98/26087 (also cited in the description)

D3: WO 98/26088 (also cited in the description)

D4: WO 92/05244

2.3 Novelty and inventive step (Art. 33(2) and (3) PCT)

The present application does not satisfy the criteria set forth in Article 33(2) and (3) PCT because,

- a) the subject-matter of Claim 19 is not new in respect of prior art as defined in the regulations (Rule 64(1)-(3) PCT)
- b) the subject-matter claimed (Claims 1-19) does not involve an inventive step (Rule 65(1)(2) PCT).

It transpires from the introductory passages in the description (see page 1, lines 5-23) that the technical problem to be solved by the present application relates to the provision of improved whole-cell assays for inhibitors of chromosome partitioning and cell division functions, which are devoid of the drawbacks derived from the use of close-related determination assays indicative of potential anti-microbial properties, in particular those assays described in D1, D2 or D3.

As a solution to the problem posed, the application proposes whole-cell assays based on the use of genetically engineered *Bacillus subtilis* strains which permit the detection/identification of inhibitors of cell division (i.e. putative antibiotic compounds) which act on a corresponding protein product of a pathogen (e.g. from *Staphylococcus aureus*) but not on that of the parent *Bacillus* strains.

It is clearly stated in the description (see page 5, lines 14-31 and pages 6-7), that the three main different approaches useful to carry out the detection assays of interest proposed in the application, are based on corresponding assays of the closest-state of the art documents D1, D2 and D3 .

The only characterizing feature which distinguishes the three main types of assays hereby described from the corresponding assays disclosed in D1, D2 and D3, respectively, consists in the (total or partial) replacement of a target gene involved in cell division (e.g. *ftsZ*) in the subject *Bacillus* strain with a homologous gene (or an equivalent section of a homologous gene), likewise involved in cell division, obtained from a different microorganism (for example, from a pathogenic *Streptococcus pneumoniae*).

However, the partly or wholly replacement of a target gene of a well-characterized microorganism (e.g. *Escherichia coli*, *Bacillus subtilis*, *Saccharomyces cerevisiae*, etc) with a functionally equivalent gene originated from a different cell source in order to facilitate/make feasible the characterization of the latter gene in a (micro)biological system easy to be handled, is in fact a working feature which has been conventionally employed in related technical fields (for instance in D4) for a variety of standard purposes, e.g. for screening active ligands or antagonistic compounds.

Regarding the foregoing it would appear that, in order to solve the underlying technical problem, it would have been obvious to the person skilled in the art to apply the aforementioned working feature (e.g. a replacement with a functionally equivalent gene of a non-easily culturable pathogenic strain) with corresponding effect to the particular assay systems based on the use of the specific *B. subtilis* engineered strains taught by D1, D2 and D3 thereby arriving at microorganisms

equivalent to those intended in Claims 1-9 and 16 and at methods similar to those according to Claims 10-15 and 17-18. The subject-matter claimed according to Claims 1 to 18 does therefore not involve an inventive step (Article 33(3) PCT).

Additionally it is noted that, contrary to the requirements of Art. 33(2) and (3) PCT, the subject-matter of independent Claim 19 is neither novel nor inventive. The method of killing or inhibiting the growth of bacteria according to present Claim 19 cannot be distinguished from the corresponding methods according to Claim 11 of D2 or Claim 10 of D3. Moreover, it is pointed out that in the light of the supporting description, where no suitable agent capable of inhibiting the growth of the microorganisms of interest is characterized, Claim 19 merely recites an obvious *desideratum* (see in this regard item 2 in Section VIII below).

## **SECTION VII**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D4 is not mentioned in the description, nor is this document identified therein.

## **SECTION VIII**

1. It is clear from the description that, to serve the purposes of the present invention, the microorganisms intended to be claimed according to Claims 1-3 should possess, at least, the following characterizing features:
  - (1) the required microorganisms belong to a *Bacillus* strain capable of growth and sporulation (see the description as a whole)
  - (2) in said *Bacillus* strain a cell division gene has been partly or wholly replaced by a homologous gene from another bacterium (cf page 7, lines 25-29)



- (3) two artificially introduced reporter genes are present, a first reporter gene having a promoter which is dependent on active  $\sigma^F$  or  $\sigma^E$  factors, and a second reporter gene which provides a measure of the synthesis of the (inactive)  $\sigma^F$  or  $\sigma^E$  factor (cf page 5, lines 20-25; page and page 7, lines 19-23.

Since independent Claim 1 does not contain these features it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

2. Independent Claim 19 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the result to be achieved which merely amounts to a statement of the underlying problem. The following functional statements do not enable the skilled person to determine which agent is necessary to perform the intended method: "an agent which inhibits the growth of a micro-organism of any one of claims 1 to 9"
3. The following (underlined) expression "an artificially introduced reporter gene is present and is expressed in a manner related to a homologous gene expression product" used in the sentence bridging pages 1-2 and in independent Claim 1 is vague and open to interpretation and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said Claim 1 (and of the claims dependent thereof/appended thereon) unclear, contrary to Article 6 PCT.

The same unclarity deficiency (Art. 6 PCT) arises from the passage on page 2, lines 17-20 as long as this recites: "... it is necessary that the homologous gene be capable of forming an expression product that is different in some respect from the expression product of the target gene."

4. It appears that on page 3, line 19 was meant to read " $\beta$ -glucuronidase".

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/03738

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9205244	A	02-04-1992	AU 652576 B	01-09-1994
			AU 8511591 A	15-04-1992
			CA 2092717 A	14-03-1992
			EP 0548165 A	30-06-1993
			JP 6500693 T	27-01-1994
			US 5482835 A	09-01-1996
			US 5739029 A	14-04-1998
WO 9918211	A	15-04-1999	AU 9791198 A	27-04-1999
WO 9700325	A	03-01-1997	EP 0833931 A	08-04-1998
			JP 11507549 T	06-07-1999
			US 6027909 A	22-02-2000
WO 9826087	A	18-06-1998	EP 0944734 A	29-09-1999
WO 9826088	A	18-06-1998	EP 0944735 A	29-09-1999

PCT/GB 99/03738

page 1 of 2

International Application No  
PCT/GB 99/03738

International Application No  
PCT/GB 99/03738

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 98 26087 A (ERRINGTON JEFFERY ;ISIS INNOVATION (GB); WU LING JUAN (GB)) 18 June 1998 (1998-06-18) cited in the application the whole document</p>	
A	<p>WO 98 26088 A (ERRINGTON JEFFERY ;ISIS INNOVATION (GB)) 18 June 1998 (1998-06-18) cited in the application the whole document</p>	



## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

KEMP &amp; Co

ROQUES, Sarah, E.

J.A. KEMP &amp; Co.

14 South Square, Gray's Inn

London WC1R 5LX

ROYAUME-UNI

12 MAY 2000

-COURT BY-

Date of mailing (day/month/year) 28 April 2000 (28.04.00)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference PP/1021 PCT	
International application No. PCT/GB99/03738	International filing date (day/month/year) 10 November 1999 (10.11.99)

## 1. The following indications appeared on record concerning:

☒ the applicant
 ☐ the inventor
 ☐ the agent
 ☐ the common representative

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	Facsimile No. +44-1865-272-412	
	Teleprinter No.	

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person
 ☐ the name
 ☒ the address
 ☐ the nationality
 ☐ the residence

Name and Address ISIS INNOVATION LIMITED Ewert House Ewert Place Summertown Oxford OX2 7BZ United Kingdom	State of Nationality GB	State of Residence GB
	Telephone No. +44-1865-272-411	
	Facsimile No. +44-1865-272-412	
	Teleprinter No.	

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input checked="" type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input type="checkbox"/> the elected Offices concerned
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colmbettes 1211 Geneva 20, Switzerland	Authorized officer I. Britel
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38



## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

ROQUES, Sarah Elizabeth  
J.A. KEMP & CO. A. KEMP & CO  
14 South Square  
Gray's Inn  
London WC1R 5EX  
GRANDE BRETAGNE

RECD 16 JUN 2000

Action by

NOTIFICATION OF RECEIPT  
OF DEMAND BY COMPETENT INTERNATIONAL  
PRELIMINARY EXAMINING AUTHORITY(PCT Rules 59.3(e) and 61.1(b), first sentence  
and Administrative Instructions, Section 601(a))Date of mailing  
(day/month/year)

13.06.00

Applicant's or agent's file reference

N. 78803A

## IMPORTANT NOTIFICATION

International application No.

PCT/GB 99/03738

International filing date (day/month/year)

10/11/1999

Priority date (day/month/year)

10/11/1998

Applicant

ISIS INNOVATION LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

26/05/2000

2. This date of receipt is:

- ☒ the actual date of receipt of the demand by this Authority (Rule 61.1(b)).  
☐ the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).  
☐ the date on which this Authority has, in response to the invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.

3. ☐ **ATTENTION:** That date of receipt is **AFTER** the expiration of 19 months from the priority date. Consequently, the election(s) made in the demand does (do) not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22). For details, see the *PCT Applicant's Guide*, Volume II.

- ☐ (If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

Name and mailing address of the IPEA/

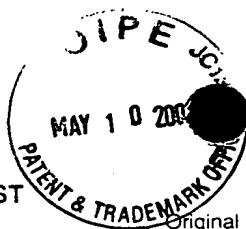
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Authorized officer

MORENO R A

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## PCT REQUEST

PP/1021 PCT

Original (for SUBMISSION) - printed on 10.11.1999 02:42:28 PM

0	For receiving Office use only	
0-1	International Application No.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.90 (updated 15.10.1999)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	United Kingdom Patent Office (RO/GB)
0-7	Applicant's or agent's file reference	PP/1021 PCT
I	Title of invention	BACILLUS STRAIN AND ASSAY METHOD
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States except US
II-4	Name	ISIS INNOVATION LIMITED
II-5	Address:	2 South Parks Road Oxford, Oxfordshire OX1 3UB United Kingdom
II-6	State of nationality	GB
II-7	State of residence	GB
II-8	Telephone No.	+44-1865-272-411
II-9	Facsimile No.	+44-1865-272-412
II-10	e-mail	innovation@isis.ox.ac.uk
III-1	Applicant and/or inventor	
III-1-1	This person is:	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	ERRINGTON, Jeffrey
III-1-5	Address:	6 Sandfield Road Headington Oxford, Oxfordshire OX3 7RG United Kingdom
III-1-6	State of nationality	GB
III-1-7	State of residence	GB

## PCT REQUEST

PP/1021 PCT

Original (for SUBMISSION) - printed on 10.11.1999 02:42:28 PM

IV-1	<b>Agent or common representative; or address for correspondence</b> The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	PENNANT, Pyers
IV-1-2	Address:	Stevens Hewlett & Perkins 1 Serjeants' Inn Fleet Street London, Greater London EC4Y 1NT United Kingdom
IV-1-3	Telephone No.	+44-171-936-2499
IV-1-4	Facsimile No.	+44-171-936-2498
IV-1-5	e-mail	mail@shplondon.co.uk
IV-2	Additional agent(s)	additional agent(s) with same address as first named agent
IV-2-1	Name(s)	BOYDELL, John, Christopher; WILKINSON, Stephen, John; MARLES, Alan, David; GAUNT, Robert, John
IV-3	Additional agent(s)	agent
IV-3-1	Name (LAST, First)	PERKINS, Sarah
IV-3-2	Address:	1 Serjeants' Inn Fleet Street London, Greater London EC4Y 1NT United Kingdom
IV-3-3	Telephone No.	+44-171-936-2499
IV-3-4	Facsimile No.	+44-171-936-2498
IV-3-5	e-mail	mail@shplondon.co.uk
V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	JP US
V-5	<b>Precautionary Designation Statement</b> In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE



## PCT REQUEST

PP/1021 PCT

Original (for SUBMISSION) - printed on 10.11.1999 02:42:28 PM

VI-1	Priority claim of earlier national application		
VI-1-1	Filing date	10 November 1998 (10.11.1998)	
VI-1-2	Number	9824682.0	
VI-1-3	Country	GB	
VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1	
VII-1	International Searching Authority Chosen	European Patent Office (EPO) (ISA/EP)	
VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	4	-
VIII-2	Description	8	-
VIII-3	Claims	4	-
VIII-4	Abstract	1	1021abs.txt
VIII-5	Drawings	0	-
VIII-7	TOTAL	17	
	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-9	Separate signed power of attorney		-
VIII-16	PCT-EASY diskette	-	diskette
VIII-17	Other (specified):	Patents Form 23/77	-
VIII-18	Figure of the drawings which should accompany the abstract		
VIII-19	Language of filing of the international application	English	
IX-1	Signature of applicant or agent		
IX-1-1	Name (LAST, First)	GAUNT, Robert, John	

## FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/EP
10-6	Transmittal of search copy delayed until search fee is paid	

PCT REQUEST

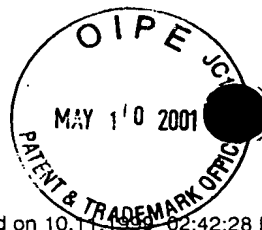
4/4

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**FOR INTERNATIONAL BUREAU USE ONLY**

11-1	Date of receipt of the record copy by the International Bureau	
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1/2

**PCT (ANNEX - FEE CALCULATION SHEET)**

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PP/1021 PCT

(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only	
0-1	International Application No.	
0-2	Date stamp of the receiving Office	
0-4	Form - PCT/RO/101 (Annex)	
0-4-1	PCT Fee Calculation Sheet Prepared using	PCT-EASY Version 2.90 (updated 15.10.1999)
0-9	Applicant's or agent's file reference	PP/1021 PCT
2	Applicant	ISIS INNOVATION LIMITED, et al.
12	Calculation of prescribed fees	fee amount/multiplier      total amounts (GBP)
12-1	Transmittal fee T	⇒ 55
12-2	Search fee S	⇒ 638
12-3	International fee Basic fee (first 30 sheets) b1	285
12-4	Remaining sheets	0
12-5	Additional amount (X)	6
12-6	Total additional amount b2	0
12-7	b1 + b2 = B	285
12-8	Designation fees Number of designations contained in international application	3
12-9	Number of designation fees payable (maximum 10)	3
12-10	Amount of designation fee (X)	65
12-11	Total designation fees D	195
12-12	PCT-EASY fee reduction R	-88
12-13	Total International fee (B+D-R) I	⇒ 392
12-14	Fee for priority document Number of priority documents requested	1
12-15	Fee per document (X)	22
12-16	Total priority document fee P	⇒ 22
12-17	TOTAL FEES PAYABLE (T+S+I+P)	⇒ 1,107
12-19	Mode of payment	cheque

**VALIDATION LOG AND REMARKS**

13-2-2	Validation messages States	Green? More designations could be made. Please verify.
13-2-6	Validation messages Contents	Green? The international application contains no drawings. Please verify.

## PCT (ANNEX - FEE CALCULATION SHEET)

PP/1021 PCT

Original (for SUBMISSION) - printed on 10.11.1999 02:42:28 PM

		<b>Yellow</b> Accompanying item "separate signed power of attorney" has not been indicated as enclosed.
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PCT

1/1

PP/1021 PCT

Original (for SUBMISSION) - printed on 10.11.1999 02:42:28 PM

### PCT-EASY INFORMATION SHEET

(For applicant use only, DO NOT submit this sheet with the international application)

### VALIDATION LOG

	<b>States</b>
<b>Green?</b>	More designations could be made. Please verify.
	<b>Contents</b>
<b>Green?</b>	The international application contains no drawings. Please verify.
<b>Yellow</b>	Accompanying item "separate signed power of attorney" has not been indicated as enclosed.

Before submitting the International Application, please carefully verify that:

- the information contained on printed Request form is correct;
- Box IX of the Request form has been signed;
- all elements of the international application as indicated in Box VIII of the Request form have been attached; and,
- the diskette containing the PCT-EASY zip file of the International Application has been enclosed and has been clearly labeled "PCT-EASY", with the applicant's or agent's file reference, and the first applicant's name.

#### ATTENTION

DO NOT modify any indications on the Request form printout. The attached PCT-EASY application has been locked. If an error or an omission is discovered at this time, you must copy the submitted application as a template and make the change or correction in a new application (using the submitted application as a template). You may create such a template by copying the submitted application from the "Stored Forms" folder to the "New PCT Forms" folder. Open the new (.OWO) file created in the "New PCT Forms" folder, correct the errors and proceed with the submission process again.

The demand must be filed directly with the competent International Preliminary Examining Authority or more Authorities are competent, with the one chosen by the applicant. The name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ EP



# PCT

## CHAPTER II

### DEMAND

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only

Identification of IPEA		Date of receipt of DEMAND
<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>		Applicant's or agent's file reference N.78803A
International application No. PCT/GB99/03738	International filing date (day/month/year) 10 November 1999	(Earliest) Priority date (day/month/year) 10 November 1998
Title of invention BACILLUS STRAIN AND ASSAY METHOD		
<b>Box No. II APPLICANT(S)</b>		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  ISIS INNOVATION LIMITED Ewert House Ewert Place Summertown Oxford, OX2 7BZ UK		Telephone No.:  Facsimile No.:  Teleprinter No.:
State (that is, country) of nationality: United Kingdom	State (that is, country) of residence: United Kingdom	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  ERRINGTON, JEFFERY 6 Sandfield Road Headington Oxford OX3 7RG UK		
State (that is, country) of nationality: United Kingdom	State (that is, country) of residence: United Kingdom	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  		
State (that is, country) of nationality:	State (that is, country) of residence:	
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.		

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**The following person is ☒ agent ☐ common representativeand ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*ROQUES, Sarah Elizabeth  
J.A. KEMP & CO.,  
14 South Square,  
Gray's Inn,  
London, WC1R 5LX,  
United Kingdom.

Telephone No.:

+44 20 7405 3292

Facsimile No.:

+44 20 7242 8932

Teleprinter No.:

23676

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments: \***

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filedthe description ☐ as originally filed  
☐ as amended under Article 34the claims ☐ as originally filed  
☐ as amended under Article 19 (together with any accompanying statement)  
☐ as amended under Article 34the drawings ☐ as originally filed  
☐ as amended under Article 342. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

**Language for the purposes of international preliminary examination: English**☒ which is the language in which the international application was filed.☐ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.**Box No. V ELECTION OF STATES**The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)*

excluding the following States which the applicant wishes not to elect:

**Box No. VI CHECK LIST**

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |   |   |        |
|--|---|---|--------|
| 1. translation of international application                              | : |   | sheets |
| 2. amendments under Article 34   | : |   | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : |   | sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : |   | sheets |
| 5. letter  | : | 1 | sheets |
| 6. other ( <i>specify</i> )  | : |   | sheets |

For International Preliminary Examining Authority use only

received                      not received

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet                             | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                            | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney, reference number, if any: | 6. <input type="checkbox"/> other ( <i>specify</i> ):   |

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

ROQUES, Sarah Elizabeth  
AUTHORISED REPRESENTATIVE

DATE: 25 May 2000

**For International Preliminary Examining Authority use only**

- |  |   |
|--|---|
| 1. Date of actual receipt of DEMAND:   |   |
| 2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):   |   |
| 3. <input type="checkbox"/> The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.                        | <input type="checkbox"/> The applicant has been informed accordingly. |
| 4. <input type="checkbox"/> The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.                               |   |
| 5. <input type="checkbox"/> Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82. |   |

**For International Bureau use only**

Demand received from IPEA on: